



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS:

Masakazu Kawai et al.

APPLICATION NO.:

10/642,477

FILING DATE:

August 15, 2003

TITLE:

Method and Processor for Obtaining Moments and Torques in a

Biped Walking System

EXAMINER:

Jeffrey Gerben Hoekstra

GROUP ART UNIT:

3736

ATTY. DKT. NO.:

20911-08172

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below:

Dated:

1/10/07

By:

Albert C. Smith, Reg. No.: 20,355

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01/17/2007 CNEGA1

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT Under 37 CFR §§ 1.56 and 1.97-98

SIR:

Pursuant to the provisions of 37 CFR §§ 1.56 and 1.97-98, enclosed herewith is modified form PTO/SB/08A listing references for consideration by the Examiner.

The filing of this Information Disclosure Statement shall not be construed as a representation regarding the completeness of the list of references, or that inclusion of a reference in this list is an admission that it is prior art or is pertinent to this application, or that a search has been made, or as an admission that the information listed is, or may be considered to be, material to patentability, or that no other material information exists, and shall not be construed as an admission against interest in any manner.

This Information Disclosure Statement is being filed:

within three months of the filing date of the application, or date of entry
into the national stage of an international application, or before the mailing
date of a first office action on the merits, whichever event last occurred;
before the mailing of a first official action after the filing of a request for
continued examination (RCE) under 37 CFR § 1.114;

\boxtimes	after th	ree mo	onths of the filing date of this national application or the date
	of entr	y of the	e national stage in an international application, or after the
	mailin	g date o	of the first official action on the merits, whichever event last
	occurr	ed, but	before the mailing date of the first to occur of either: (1) a
	final a	ction u	nder 37 CFR §1.113; or (2) an action that otherwise closes
	prosec	ution in	n the application, and:
	\boxtimes	attacl	hed hereto is the fee set forth under 37 CFR §1.17(p) for
		subm	hission of this Information Disclosure Statement under 37
		CFR.	§ 1.97(c); OR
		Appl	icant certifies pursuant to 37 CFR § 1.97(e) that:
			each item of information contained in this Information
			Disclosure Statement was first cited in a communication
			from a foreign patent office in a counterpart foreign
			application not more than three months prior to the filing of
			this Statement; OR
			no item of information contained in this Information
			Disclosure Statement was cited in a communication from a
			foreign patent office in a counterpart foreign application
			and, to the knowledge of the person signing this
			certification after making reasonable inquiry, no item of
			information contained in this Statement was known to any
			individual designated under 37 CFR § 1.56(c) more than
			three months prior to the filing of this Statement;
	on or	before	the payment of the issue fee but after the mailing date of the
	first t	o occur	of either: (1) a final action under 37 CFR § 1.113; (2) a
	notice	e of allo	owance under 37 CFR § 1.311; or (3) an action that otherwise
	closes	s prosec	cution in the application, and:
		Appl	icant certifies pursuant to 37 CFR. § 1.97(e) that:
			each item of information contained in this Information
			Disclosure Statement was cited in a communication from a
			foreign patent office in a counterpart foreign application not
			more than three months prior to the filing of this Statement;
			no item of information contained in this Information
			Disclosure Statement was cited in a communication from a
			foreign patent office in a counterpart foreign application
			and, to the knowledge of the person signing this

•			•	certification after making reasonable inquiry, no item of	
				information contained in this Statement was known to any	y
				individual designated under 37 CFR § 1.56(c) more than	
				three months prior to the filing of this Statement; AND	
				attached hereto is the fee set forth under 37 CFR §1.17(p) for	
				submission of this Information Disclosure Statement under 37	
				CFR.§ 1.97(d); OR	
			after th	he payment of the issue fee. Applicant requests that the informatio	n
			contair	ined in this Information Disclosure Statement be placed in the file	
			accord	ding to 37 CFR § 1.97(i), although the information may not be	
			consid	dered by the USPTO.	
		Enclos	sed is a	copy of each listed reference that may be material to the	
		exami	nation o	of this application, and for which there may be a duty to disclose.	
		This a	pplication	ion relies, under 35 U.S.C. § 120, on the earlier filing date of prior	
		applic	ation No	o, filed on, and the references cited therein are	
		hereby	referen	nced, but are not required to be provided in this application under 3	37
		CFR §	1.98(d)	l).	
	\boxtimes	Copies	s of any	foreign patent documents and non-patent literature cited herein are	e
		enclos	ed.		
		Each i	tem of i	information contained in this Information Disclosure Statement wa	ıs
		cited i	n a com	nmunication from a foreign patent office in a counterpart applicatio	n,
		and th	e comm	nunication was not received by any individual designated in 37 CFI	R
		§ 1.56	(c) more	re than thirty days prior to the filing of this Information Disclosure	
		Statem	nent. 37	7 CFR § 1.704(d).	
		Applio	cant sub	omits that no fee is required for the consideration of this Informatio	'n
		Disclo	sure Sta	ratement.	
	Consid	deration	of the l	listed references and favorable action are solicited.	
				Respectfully submitted,	
			,	MASAKAZU KAWAI ET AL.	
Dated:			0/0	By: a (Smith	
Daite.				Albert C. Smith, Reg. No. 20,355	_
				Fenwick & West LLP	
				Silicon Valley Center 801 California Street	
				Mountain View, CA 94041	
				Tel.: (650) 335-7296	
				Fax.: (650) 938-5200	

	Substitute for form 1449A/PTO		Complete if Known	
	INFORMATION DISCLOSURE	Application No.	10/642,477	
	INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	August 15, 2003	
	/	First Named Inventor	Masakazu Kawai	
	(JAN 1'6, 2007 g	Art Unit	3736	
	13	Examiner Name	Jeffrey Gerben Hoekstra	
S	hee of 2	Attorney Docket Number	20911-08172	
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	U.S. PATENT DOCUMENTS							
		Document No.						
Examiner Initials*	Cite No.1	Number – Kind Code ² (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document				
	A1	US-7,112,938	09-26-2006	Takenaka et al.				
	A2	US-2004/0193318 A1	09-30-2004	Ito .				
	A3	US-6,076,025	06-13-2000	Ueno				
	A4	US-6,045,524	04-04-2000	Hayashi et al.				
	A5	US-5,942,869	08-24-1999	Katou et al.				
	A6	US-5,706,589	01-13-1998	Marc				
-	A7	US-5,323,549	06-28-1994	Segel et al.				

FOREIGN PATENT DOCUMENTS								
		Foreign Patent Document						
Examiner Initials*	Cite No.1	Country Code ³ – Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	٣			

	OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶				
	C1	"Berkeley Researchers Developing Robotic Exoskeleton That Can Enhance Human Strength and					
		Endurance, "ScienceDaily LLC, 1995-2004, [online] [Retrieved on October 9, 2006] Retrieved from the					
		Internet <url:http: bleex.me.berkeley.edu="" bleexhistpdfs="" sciencedaily.pdf=""></url:http:>					
	C2	DURFEE, W.K., "Preliminary Design and Simulation of a Pneumatic, Stored-Energy, Hybrid Orthosis for Gait					
		Restoration," Proceedings of IMECE04, 2004 ASME International Mechanical Engineering Congress,	}				
		November 13-20, 2004, [online] [Retrieved on October 9, 2006] Retrieved from the Internet <url:< td=""><td></td></url:<>					
		http://www.me.umn.edu/~wkdurfee/publications/IMECE2004-60075.pdf >					
	C3	International Search Report and Written Opinion, PCT/US06/11727, November 9, 2006, 9 pages.					
	C4	ISAACS, P.M. et al., "Controlling Dynamic Simulation with Kinematic Constraints, Behavior Functions, and					
		Inverse Dynamics," Computer Graphics, July 1987, pp. 215-224, Vol. 21, No. 4.					
	C5	MADIGAN, R.R., "Ankle-Foot Orthoses (AFO's) in Spastic Cerebral Palsy," Fillauer LLC, [online] [Retrieved					
		on October 9, 2006] Retrieved from the					

Examiner Signature	Date Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

	Substitute for f	orm 1449 <i>f</i>	VPTO	Complete if Known		
INIE		ו חופי	CLOSURE	Application No.	10/642,477	
			PPLICANT	Filing Date	August 15, 2003	
SIA	I E I VI E I VI E	o i Ar	PLICANT	First Named Inventor	Masakazu Kawai	
				Art Unit	3736	
				Examiner Name	Jeffrey Gerben Hoekstra	
Sheet	2	of	2	Attorney Docket Number	20911-08172	

	OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶			
		Internet <url:http: ed_afo.html#dynamic="" education="" www.fillauer.com=""></url:http:>				
PRATT, G.A. et al., "Active Orthotics for Helping the Neuromuscularly Impaired to Walk," [online] [Retrieved on October 9, 2006] Retrieved from the Internet <url:http: <="" td=""></url:http:>						
www.vcl.uh.edu/~rcv03/materials/grant/9733740.1064791086.pdf> C7 "Regenerative Foot Braking," [online] [Retrieved on October 9, 2006] Retrieved from the Internets IRI : http://www.halfbakery.com/idea/regenerative_20foot_20braking#1069693200>						
	"Sensorless Fet Element DC Motor Driver," [online] [Retrieved on October 9, 2006] Retrieved from the Internet <url:http: bridge="" bridge.shtml="" robotx.sourceforge.net=""></url:http:>					
	C9	TROST, F.J., "Energy-Storing Feet," JACPOC, 1989, Vol. 24, No. 4, [online] [Retrieved on October 9, 2006] Retrieved from the Internet <url:http: 1989_04_082.asp="" jacpoc.oandp.com="" library=""></url:http:>				

Examiner Signature		Date Considered	
	•		

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

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EE TRANSMITTAL for FY 2006

Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180

Complete if Known			
Application Number	10/642,477		
Filing Date	August 15, 2003		
First Named Inventor	Masakzau Kawai		
Examiner Name	Jeffrey Gerben Hoekstra	*	
Art Unit	3736_		
Attorney Docket No.	20911-08172		

METHOD OF PAYMENT (check all that apply)			FEE CALCULATION (continued)						
□ Check □ Credit Card □ Money Order □ Other □ None □ Deposit Account:		3. ADDITIONAL FEES			s				
Deposit Account Number	19-2555	Large E	Entity	Small	Entity	Fee Description	Fee Paid		
Deposit Account Name	Fenwick & West LLP	Fee Code	Fee (\$)	Fee Code	Fee (\$)				
The Commissioner is authorized to: (check all that apply) ☐ Charge fee(s) indicated below ☐ Credit any overpayments ☐ Charge all required fee(s) or any underpayment of fee(s) due		1051 1052 1053	130 50 130	2051 2052 1053	65 25 130	Surcharge - late filing fee or oath or declaration Surcharge - late provisional filing fee or cover sheet Non-English specification			
under 37 CFR §1.16 or §1.17 during the pendency of this		1812	2,520		2,520	For filing a request for ex parte reexamination			
application Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.		1804 1805	920* 1,840*	1804 1805	920* 1,840*	Requesting publication of SIR prior to Examiner action Requesting publication of SIR after Examiner action			
FEE CA	LCULATION	1251	120	2251	60	Extension for reply within first month			
1. BASIC FILING FEE Large Entity Small Entity Fee Fee Fee Fee Code (\$) Code (\$)	Fee Description Fee Paid	1252 1253 1254 1255 1401 1402	450 1020 1,590 2,160 500 500	2252 2253 2254 2255 2401 2402	225 510 795 1,080 250 250	Extension for reply within second month Extension for reply within third month Extension for reply within fourth month Extension for reply within fifth month Notice of Appeal			
		1403	1000	2403	500	Filing a brief in support of an appeal Request for oral hearing			
		1451	1,510	1451	1,510	Petition to institute a public use proceeding	· .		
SUBTOT	AL (1) (\$) 0	1452 1453	500 1,500	2452	250 750	Petition to revive - unavoidable Petition to revive - unintentional			
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE		1501	1,400	2501	700	Utility issue fee (or reissue)			
	a Claims Fee from Fee Paid	1502	800	2502	400	Design issue fee			
Total Claims -20**=	x =	1503	1100	2503	550	Plant issue fee			
Independent Claims -3** =	x =	1460		1460		Petitions to the Director			
Multiple Dependent		1807	50	1807	50	Processing fee for Provisional Applications			
Large Entity Small Entity		1806	180	1806	180	Submission of Information Disclosure Stmt	180		
Fee Fee Fee Code (\$)	Fee Description	8021	40	8021	40	Recording each patent assignment per property (times number of properties)			
1202 50 2202 25	Claims in excess of 20	1809	790	2809	395	Filing a submission after final rejection (37 CFR 1.129(a))			
1201 200 2201 100	Independent claims in excess of 3	1810	790	2810	395	For each additional invention to be examined (37 CFR 1.129(b))			
1203 360 2203 180	Multiple dependent claim, if not paid	1801	790	2801	395	Request for Continued Examination (RCE)			
1204 200 2204 100	**Reissue independent claims over original patent	1802	900	1802	900	Request for expedited examination of a design application			
1205 50 2205 25 **Reissue claims in excess of 20 and over original patent			Other fee (specify)						
SUBTOTAL (2) (\$) 0 "or number previously paid, if greater; For Reissues, see above *Reduced by Basic Filing Fee Paid *Reduced by Basic Filing Fee Paid									

SUBMITTED BY		Complete (if applicable)			
Name (Print/Type)	Albert C. Smith	Registration No. (Attorney/Agent) 20,355		Telephone (650) 335-7296	
Signature	\bigcup	· (· Smith	Date	1/10/07	



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		Application Number		10/642,477			
			Filing D	Pate	August 15, 2003		
TRANSMITTAL FORM			First Na	amed Inventor	Masakazu Kawai		
(to be used for all correspondence during pendency of filed application)		Group Art Unit Number		3736			
			Examin	ner Name	Jeffrey Gerben Hoekstra		
Total Number of Pages in This Submission 8*			Attorne	y Docket Number	20911-08172		
	ENCL	OSURES	(chec	k all that apply	()		
ENCLOSURES Fee Transmittal Form (in duplicate) Check Enclosed Return Receipt Postcard Response to Notice to File Missing Parts Assignment & Recordation Cover Sheet Declaration Power of Attorney Application Data Sheet Supplemental Information Disclosure Statement & PTO/SB/08A Copies of IDS Cited References Request for Corrected Filing Receipt Request for Correction of Recorded Assignment Amendment/Response: [] Page(s)				Issue Fee Transi Letter to Chief Di Formal Drawing(mittal raftsperson s): s) of Figure(s) [] ilication to Board of A)	
REMARKS: *Page count does not include cited references.							
	SIGNA	TURE OF	ATTOF	RNEY OR AGE	NT.		
Signature:		O ₄	. / .	\(\frac{1}{2}\)	rt.		
Attorney/Reg. No.:	Albert C. Smith, Reg	. No. 20, 355			Dated:	10 07	
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Signature:		\overline{Q}	((1 Xm	th	1 1	
Typed or Printed Nar	ne: Albert C. Smith	1			Dated: /	10/07	
Express Mail Mailing Number (optional):							